Exhibit 2

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/292,939	12/02/2005	Anton Monk	E040004USU4	2904

77330   7590   08/03/2010
ENTROPIC COMMUNICATIONS, INC.
6290 SEQUENCE DRIVE
SAN DIEGO, CA 92121

EXAMINER
ZHAO, WEI

ART UNIT	PAPER NUMBER
2475	

MAIL DATE	DELIVERY MODE
08/03/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	11/292,939	MONK ET AL.
	Examiner	Art Unit	
	WEI ZHAO	2475	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2010*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,10-12,15-35 and 38-46* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,10-12,15,16,18-35,38,39 and 41-46* is/are rejected.

7)☒ Claim(s) *4,17,27 and 40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3)☐ Information Disclosure Statement(s) (PTO/SB/08)	5)☐ Notice of Informal Patent Application
Paper No(s)/Mail Date _____ .	6)☐ Other: _____ .

Application/Control Number: 11/292,939   Page 2

Art Unit: 2475

DETAILED ACTION

Specification

1.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2.   Claims 1, 3-7, 10 and 11 are objected to under 37 CFR 1.75(c) because of the following informalities:

Regarding claim 1, the term "packets" in line 4 seems to refer back to "packets" in line 2. If this is true, it is suggested to change "packets" to --- the packets ---.

Claims 3-7 and 10-11 are objected to since they all depend from claim 1.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Application/Control Number: 11/292,939   Page 3

Art Unit: 2475

Claim 3 recites the limitation of claim 2 that has been cancelled. Claim 3 is

rejected since there is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

7.   Claims 1, 3, 5-7, 12, 15-16, 18-22, 24-26, 28-30, 35, 38-39, 41-43 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Nikolich et al. (US 6,826,195 B1) in

view of the prior art disclosed in the Background of the Invention of Nikolich et al. and

Dunn et al. (US 4,761,796), and further in view of Cafarelli et al. (US 2003/0012163 A1).

Regarding claim 1, Nikolich et al. disclose the BCN modem having a transmitter

transmitting packets to a plurality of nodes in a broadband cable network, the

Application/Control Number: 11/292,939   Page 4
Art Unit: 2475

transmitter comprising: a MAC subsystem providing packets for transmission within the

broadband cable network (column [9] lines 47-56). Nikolich et al. teach the subject

matter as described with the exception of implementing the Modem subsystem. The

prior art disclosed in the Background of the Invention of Nikolich et al. teach

implementing a Modem subsystem in signal communication with the MAC subsystem,

the Modem subsystem capable of receiving the packets from the MAC subsystem and

appending information to the packets (column [1] lines 31-38). Thus, at the time of the

invention it would have been obvious to one of ordinary skill in the art to implement the

Modem subsystem to the system of Nikolich et al. The motivation for using the method

of Nikolich et al. in implementing the Modem subsystem is to integrate systems in order

to reduce costs and to ease system management.

Nikolich et al. and the prior art disclosed in Nikolich et al. teach all the subject

matter with the exception of implementing the RF subsystem. Dunn et al. from the same

or similar field of endeavor teach implementing fairness of the method, wherein the RF

subsystem in signal communication with the Modem subsystem, capable of receiving

the packets from the Modem subsystem and upconverting the packets received from

the Modem subsystem (column [5] lines 14-21). Thus, it would have been obvious to

one of ordinary skill in the art to implement the method of Dunn et al. in the system of

Nikolich et al. and the prior art disclosed in Nikolich et al. The method of Nikolich et al.

and the prior art disclosed in Nikolich et al. can be implemented on any type of RF

subsystem, which is taught by Dunn et al. The motivation for using the method of

Application/Control Number: 11/292,939   Page 5

Art Unit: 2475

Nikolich et al. and the prior art disclosed in Nikolich et al. on implementing the RF

subsystem is to provide a stand alone function with a well defined flexible interface.

Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. teach all

the subject matter with the exception of implementing the method, wherein at least one

of the packets is a beacon packet that has a channel number field, change field,

sequence number field, network coordinator ID field, next beacon index field, admission

frame length field, admission window, asynchronous MAP length field and a beacon

CRC field. Cafarelli et al. from the same or similar field of endeavor teach implementing

fairness of the method, wherein at least one of the packets is a beacon packet that has

a channel number field, change field, sequence number field, network coordinator ID

field, next beacon index field, admission frame length field, admission window,

asynchronous MAP length field and a beacon CRC field (paragraph [0053] lines 1-4).

Thus, it would have been obvious to one of ordinary skill in the art to implement the

method of Cafarelli et al. in the system of Nikolich et al., the prior art disclosed in

Nikolich et al., and Dunn et al. The method of Nikolich et al., the prior art disclosed in

Nikolich et al., and Dunn et al. can be implemented on any type of the method, wherein

at least one of the packets is a beacon packet that has a channel number field, change

field, sequence number field, network coordinator ID field, next beacon index field,

admission frame length field, admission window, asynchronous MAP length field and a

beacon CRC field, which is taught by Cafarelli et al. The motivation for using the method

of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. on

implementing the method, wherein at least one of the packets is a beacon packet that

Application/Control Number: 11/292,939   Page 6

Art Unit: 2475

has a channel number field, change field, sequence number field, network coordinator

ID field, next beacon index field, admission frame length field, admission window,

asynchronous MAP length field and a beacon CRC field, is to provide the packet that

contains a timestamp and configuration information about the access point.

Regarding claim 3, Nikolich et al., the prior art disclosed in Nikolich et al., and

Dunn et al. teach all the subject matter with the exception of implementing the variable

length payload. Cafarelli et al. from the same or similar field of endeavor teach

implementing fairness of the method, wherein the data and control packet has a header

and a variable length payload (paragraph [0066] lines 1-20). Thus, it would have been

obvious to one of ordinary skill in the art to implement the method of Cafarelli et al. in

the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The

method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be

implemented on any type of packet having variable length payload, which is taught by

Cafarelli et al. The motivation for using the method of Nikolich et al., the prior art

disclosed in Nikolich et al., and Dunn et al. on implementing the variable length payload

is to carry information that pertains to the specific packet being sent.

Regarding claim 5, Nikolich et al., the prior art disclosed in Nikolich et al., and

Dunn et al. teach all the subject matter with the exception of implementing the variable

length payload. Cafarelli et al. from the same or similar field of endeavor teach

implementing fairness of the method, where the variable length payload carries

encrypted data (paragraph [0066] lines 1-20). Thus, it would have been obvious to one

of ordinary skill in the art to implement the method of Cafarelli et al. in the system of

Application/Control Number: 11/292,939   Page 7
Art Unit: 2475

Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The method of

Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be

implemented on any type of packet having variable length payload, which is taught by

Cafarelli et al. The motivation for using the method of Nikolich et al., the prior art

disclosed in Nikolich et al., and Dunn et al. on implementing the variable length payload

is to carry information that pertains to the specific packet being sent.

Regarding claim 6, Nikolich et al., the prior art disclosed in Nikolich et al., and

Dunn et al. teach all the subject matter with the exception of implementing the variable

length payload. Cafarelli et al. from the same or similar field of endeavor teach

implementing fairness of the method, where the variable length payload carries

encapsulated MPEG data (paragraph [0066] lines 1-20). Thus, it would have been

obvious to one of ordinary skill in the art to implement the method of Cafarelli et al. in

the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The

method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be

implemented on any type of packet having variable length payload, which is taught by

Cafarelli et al. The motivation for using the method of Nikolich et al., the prior art

disclosed in Nikolich et al., and Dunn et al. on implementing the variable length payload

is to carry information that pertains to the specific packet being sent.

Regarding claim 7, Nikolich et al., the prior art disclosed in Nikolich et al., and

Dunn et al. teach all the subject matter with the exception of implementing the variable

length payload. Cafarelli et al. from the same or similar field of endeavor teach

implementing fairness of the method, where the variable length payload carries

Application/Control Number: 11/292,939   Page 8

Art Unit: 2475

encapsulated Ethernet data (paragraph [0066] lines 1-20). Thus, it would have been

obvious to one of ordinary skill in the art to implement the method of Cafarelli et al. in

the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The

method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be

implemented on any type of packet having variable length payload, which is taught by

Cafarelli et al. The motivation for using the method of Nikolich et al., the prior art

disclosed in Nikolich et al., and Dunn et al. on implementing the variable length payload

is to carry information that pertains to the specific packet being sent.

Regarding claim 12, it is similar to claim 1. Claim 12 is rejected for the same

reasons as to claim 1.

Regarding claim 15, Nikolich et al. disclose the BCN modem, wherein the RF

subsystem is capable of receiving a control and data packet (column [10] lines 8-26).

Regarding claims 18-20, these three claims are similar to claims 5-7. Claims 18-

20 are rejected for the same reasons as to claims 5-7.

Regarding claims 21-22, these two claims are similar to claim 3. Claims 21-22

are rejected for the same reasons as to claim 3.

Regarding claims 24-25, these two claims are similar to claims 1-2 individually.

Claims 24-25 are rejected for the same reasons as to claims 1-2.

Regarding claim 26, it is similar to claim 3. Claim 26 is rejected for the same

reasons as to claim 3.

Application/Control Number: 11/292,939   Page 9

Art Unit: 2475

Regarding claims 28-30, these three claims are similar to claims 5-7 individually.

Claims 28-30 are rejected for the same reasons as to claims 5-7.

Regarding claim 39, it is similar to claim 3. Claim 39 is rejected for the same

reasons as to claim 3.

Regarding claims 35 and 38, these two claims are similar to claims 1 and 15.

Claims 35 and 38 are rejected for the same reasons as to claims 1 and 15.

Regarding claims 41-43, these three claims are similar to claims 5-7 individually.

Claims 41-43 are rejected for the same reasons as to claims 5-7.

8.   Claims 10-11, 23, 33-34, and 44-46 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Nikolich et al. (US 6,826,195 B1) in view of the prior art disclosed in

the Background of the Invention of Nikolich et al. and Dunn et al. (US 4,761,796) as

applied to claim 1, 12, 24 or 35, and further in view of Diener et al. (US 7,184,777 B2).

Regarding claim 10, Nikolich et al., the prior art disclosed in Nikolich et al., and

Dunn et al. teach all the subject matter with the exception of implementing the probe

packet. Diener et al. from the same or similar field of endeavor teach implementing

fairness of the method, wherein the packet is a probe packet for transmission within the

broadband cable network (column [12] line 56 – column [13] line 4). Thus, it would have

been obvious to one of ordinary skill in the art to implement the method of Diener et al.

in the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al.

Application/Control Number: 11/292,939   Page 10

Art Unit: 2475

The method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be implemented on any type of probe packet, which is taught by Diener et al. The motivation for using the method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. on implementing the probe packet is to trend information to detect suspicious protocol usage.

Regarding claim 11, Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. teach all the subject matter with the exception of implementing the probe packet. Diener et al. from the same or similar field of endeavor teach implementing fairness of the method, further including a diversity mode for transmission of the probe packet (column [12] line 56 – column [13] line 4). Thus, it would have been obvious to one of ordinary skill in the art to implement the method of Diener et al. in the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be implemented on any type of probe packet, which is taught by Diener et al. The motivation for using the method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. on implementing the probe packet is to trend information to detect suspicious protocol usage.

Regarding claim 23, this claim is similar to claim 10. Claim 23 is rejected for the same reasons as to claim 10.

Regarding claims 33-34, these two claims are similar to claims 10-11. Claims 33-34 are rejected for the same reasons as to claims 10-11.

Application/Control Number: 11/292,939   Page 11

Art Unit: 2475

Regarding claim 44, Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. teach all the subject matter with the exception of implementing the probe packet. Diener et al. from the same or similar field of endeavor teach implementing fairness of the method, where receiving packets includes receiving a probe packet (column [12] line 56 – column [13] line 4). Thus, it would have been obvious to one of ordinary skill in the art to implement the method of Diener et al. in the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be implemented on any type of probe packet, which is taught by Diener et al. The motivation for using the method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. on implementing the probe packet is to trend information to detect suspicious protocol usage.

Regarding claim 45, Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. teach all the subject matter with the exception of implementing the probe packet. Diener et al. from the same or similar field of endeavor teach implementing fairness of the method, where receiving the probe packet at the RF system further includes receiving the probe packet sent in a look back mode from the BCN modem (column [12] line 56 – column [13] line 4). Thus, it would have been obvious to one of ordinary skill in the art to implement the method of Diener et al. in the system of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. The method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. can be implemented on any type of probe packet, which is taught by Diener et al. The motivation for using the

Application/Control Number: 11/292,939 Page 12

Art Unit: 2475

method of Nikolich et al., the prior art disclosed in Nikolich et al., and Dunn et al. on implementing the probe packet is to trend information to detect suspicious protocol usage.

Regarding claim 46, this claim is similar to claim 10. Claim 46 is rejected for the same reasons as to claim 10.

Allowable Subject Matter

9.   Claims 4, 17, 27 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4 and 17, the prior art in single or in combination, fails to teach "the BCN modem, wherein the header has at least five fields selected from the group consisting of a transmit clock field, packet type field, packet subtype field, version field, source node ID field, destination node ID field, and header check sequence field" in combination with other limitation of the claim(s).

Regarding claims 27 and 40, the prior art in single or in combination, fails to teach "the method, wherein the header has at least five fields selected from the group consisting of a transmit clock field, packet type field, packet subtype field, version field, source node ID field, destination node ID field, and header check sequence field" in combination with other limitation of the claim(s).

Application/Control Number: 11/292,939   Page 13

Art Unit: 2475

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Beshai (US 2002/0080790 A1) is cited to show a method for universal transfer

mode of transferring data packets at a regulated bit rate.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to WEI ZHAO whose telephone number is (571)270-5672.

The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 11/292,939   Page 14

Art Unit: 2475

Wei Zhao
Examiner
Art Unit 2475

/W. Z./
Examiner, Art Unit 2475

/DANG T TON/
Supervisory Patent Examiner, Art Unit 2475/D. T. T./
Supervisory Patent Examiner, Art Unit 2475